



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION:	PW306A	BYPASS RATIO:	4.5
UNIQUE ID NUMBER:	7PW077	PRESSURE RATIO ( $\pi_{00}$ ):	20.0
COMBUSTOR:	Annular		
ENGINE TYPE:	MTF	RATED THRUST ( $F_{00}$ ) (kN):	26.9

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	12.4	107.5	58.9	4.3
AS % OF ORIGINAL LIMIT	63.3	91.1	73.6	12.7
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			92.0	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			92.1	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			92.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			97.0	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.317	0.00	2.27	20.08	2.6
CLIMB OUT	85	2.2	0.264	0.00	2.51	19.26	0.8
APPROACH	30	4.0	0.097	0.00	7.11	11.87	0.0
IDLE	7	26.0	0.042	4.36	36.35	4.26	0.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			137	287	2677	1497	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				10.6	99.4	55.6	3.9
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				6.3-13.7	87-120.3	52.7-58	3-5.1

### ACCESSORY LOADS

POWER EXTRACTION	0	(kW)	AT	-	POWER SETTINGS
STAGE BLEED	0	(% CORE FLOW)	AT	-	POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.4-99.5
TEMPERATURE (K)	284-300
ABS HUMIDITY (kg/kg)	0.0054-0.0144

### FUEL

SPEC	Jet A-1
H/C	1.85-1.87
AROM (%)	20-22.5

MANUFACTURER: Pratt & Whitney Canada  
 TEST ORGANIZATION: PW306 Development Engineering  
 TEST LOCATION: Mississauga, Ontario, Canada  
 TEST DATES: 08/05/2000-20/07/2000

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

### REMARKS

- P&WC EC C2264A
- Engines E9541/02, E9402/37, E9403/74
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements: -

('x' if complies, 'PR' if pre-regulation, '-' if information is not available)